

AMENDMENTS TO THE CLAIMS

1-29. (Cancelled)

30. (New) A method for recording a digital data stream on a recording medium, comprising:

recording the digital data stream by dividing the digital data stream into stream objects;
recording common information for the stream objects; and
recording stream time map information in a stream information file of the recording medium, the stream time map information including a time mapping list having time search information for searching the stream objects.

31. (New) The method of claim 30, wherein the step of recording the stream time map information includes recording stream time map general information in the stream information file, the stream time map general information including management information of the stream objects recorded on the recording medium.

32. (New) The method of claim 31, wherein each of the stream objects has a plurality of stream object units, and the time mapping list has the time search information for searching each of the stream object units.

33. (New) The method of claim 30, wherein the time mapping list includes a plurality of sub time mapping lists, each of the sub time mapping lists has the time search information for searching the corresponding one of the stream objects.

34. (New) The method of claim 30, wherein the step of recording the common information includes recording a table of content in an application information file of the recording medium.

35. (New) The method of claim 34, wherein the table of content includes random-access entry point information that allows random access to the recorded data stream.

36. (New) The method of claim 30, wherein the step of recording the common information includes recording the common information in a common information file of the recording medium, the common information including a playlist for the stream objects.

37. (New) The method of claim 36, wherein the common information further includes presentation sequence information of the recorded digital data stream.

38. (New) An apparatus for recording a digital data stream on a recording medium, comprising:

a recording unit to record the digital data stream by dividing the digital data stream into stream objects, to record common information for the stream objects, and to record stream time map information in a stream information file of the recording medium, the stream time map information including a time mapping list having time search information for searching the stream objects.

39. (New) The apparatus of claim 38, wherein the recording unit for recording the stream time map information records stream time map general information in the stream information file, the stream time map general information including management information of the stream objects recorded on the recording medium.

40. (New) The apparatus of claim 39, wherein each of the stream objects has a plurality of stream object units, and the time mapping list has the time search information for searching each of the stream object units.

41. (New) The apparatus of claim 38, wherein the time mapping list includes a plurality of sub time mapping lists, each of the sub time mapping lists has the time search information for searching the corresponding one of the stream objects.

42. (New) The apparatus of claim 38, wherein the recording unit for recording the common information records a table of content in an application information file of the recording medium.

43. (New) The apparatus of claim 42, wherein the table of content includes random-access entry point information that allows random access to the recorded data stream.

44. (New) The apparatus of claim 38, wherein the recording unit for recording the common information records the common information in a common information file of the recording medium, the common information including a playlist for the stream objects.

45. (New) The apparatus of claim 44, wherein the common information further includes presentation sequence information of the recorded digital data stream.

46. (New) A recording medium for recording digital data using a digital data recorder, comprising:

a digital data stream divided into stream objects and recorded on the recording medium;
common information recorded on the recording medium for the stream objects; and
stream time map information recorded in a stream information file of the recording medium, the stream time map information including a time mapping list having time search information for searching the stream objects.

47. (New) The recording medium of claim 46, wherein stream time map information includes stream time map general information in the stream information file, the stream time map general information including management information of the stream objects recorded on the recording medium.

48. (New) The recording medium of claim 47, wherein each of the stream objects has a plurality of stream object units, and the time mapping list has the time search information for searching each of the stream object units.

49. (New) The recording medium of claim 46, wherein the time mapping list includes a plurality of sub time mapping lists, each of the sub time mapping lists has the time search information for searching the corresponding one of the stream objects.

50. (New) The recording medium of claim 46, wherein the common information includes a table of content recorded in an application information file of the recording medium.

51. (New) The recording medium of claim 50, wherein the table of content includes random-access entry point information that allows random access to the recorded data stream.

52. (New) The recording medium of claim 46, wherein the common information is recorded in a common information file of the recording medium, the common information including a playlist for the stream objects.

53. (New) The recording medium of claim 52, wherein the common information further includes presentation sequence information of the digital data stream.